

09/890463

PCT/AU00/00056

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1

Sequenc Listing:

<110> The University of Sydney

<120> Pigment protein from coral tissue

<160> 15

<170> PatentIn Ver. 2.1

<210> 1

<211> 5

<212> PRT

<213> Acropora aspera, Acropora horrida, Montipora caliculata, Porites murrayensis, Montipora monasteriata, and Porites lobata

<400> 1

Ser Val Ile Ala Lys
1 5

<210> 2

<211> 17

<212> PRT

<213> Acropora horrida

<400> 2

Ser Val Ile Ala Lys Gln Met Thr Tyr Lys Val Tyr Met Ser Gly Thr
1 5 10 15

Val

<210> 3

<211> 231

<212> PRT

<213> Acropora aspera

<400> 3

Ser Val Ile Ala Lys Gln Met Thr Tyr Lys Val Tyr Met Ser Gly Thr
1 5 10 15Val Asn Gly His Tyr Phe Glu Val Glu Gly Asp Gly Lys Gly Lys Pro
20 25 30Tyr Glu Gly Glu Gln Thr Val Arg Leu Ala Val Thr Lys Gly Gly Pro
35 40 45Leu Pro Phe Ala Trp Asp Ile Leu Ser Pro Gln Cys Gln Tyr Gly Ser
50 55 60Ile Pro Phe Thr Lys Tyr Pro Glu Asp Ile Pro Asp Tyr Val Lys Gln
65 70 75 80Ser Phe Pro Gly Arg Tyr Thr Trp Glu Arg Ile Met Asn Phe Glu Asp
85 90 95Gly Ala Val Cys Thr Val Ser Asn Asp Ser Ser Ile Gln Gly Asn Cys
100 105 110

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2

Phe Ile Tyr His Val Lys Phe Ser Gly Leu Asn Phe Pro Pro Asn Gly
 115 120 125
 Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Asn Thr Glu Arg
 130 135 140
 Leu Phe Ala Arg Asp Gly Met Leu Ile Gly Asn Asn Phe Met Ala Leu
 145 150 155 160
 Lys Leu Glu Gly Gly Gly His Tyr Leu Cys Glu Phe Lys Ser Thr Tyr
 165 170 175
 Lys Ala Arg Lys Pro Val Lys Met Pro Gly Tyr His Tyr Val Asp Arg
 180 185 190
 Lys Leu Asp Val Thr Asn His Asn Lys Asp Tyr Thr Ser Val Glu Gln
 195 200 205
 Arg Glu Ile Ser Ile Ala Arg Lys Pro Leu Val Ala Cys Cys Phe Phe
 210 215 220
 Arg Val Lys Ser Arg His Lys
 225 230

<210> 4
 <211> 235
 <212> PRT
 <213> Acropora aspera

<400> 4
 Ser Val Ile Ala Lys Gln Met Thr Tyr Lys Val Tyr Met Ser Gly Thr
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 Val Asn Gly His Tyr Phe Glu Val Glu Gly Asp Gly Lys Gly Lys Pro
 20 25 30
 Tyr Glu Gly Glu Gln Thr Val Arg Leu Ala Val Thr Lys Gly Gly Pro
 35 40 45
 Leu Pro Phe Ala Trp Asp Ile Leu Ser Pro Gln Cys Gln Tyr Gly Ser
 50 55 60
 Ile Pro Phe Thr Lys Tyr Pro Glu Asp Ile Pro Asp Tyr Val Lys Gln
 65 70 75 80
 Ser Phe Pro Gly Arg Tyr Thr Trp Glu Arg Ile Met Asn Phe Glu Asp
 85 90 95
 Gly Ala Val Cys Thr Val Ser Asn Asp Ser Ser Ile Gln Gly Asn Cys
 100 105 110
 Phe Ile Tyr His Val Lys Phe Ser Gly Leu Asn Phe Pro Pro Asn Gly
 115 120 125
 Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Asp Thr Glu Arg
 130 135 140
 Leu Phe Ala Arg Asp Gly Met Leu Ile Gly Asn Asn Phe Met Ala Leu
 145 150 155 160

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3

Lys Leu Glu Gly Gly Gly His Tyr Leu Cys Glu Phe Lys Ser Thr Tyr
165 170 175

Lys Ala Lys Lys Pro Val Lys Met Pro Gly Tyr His Tyr Val Asp Arg
180 185 190

Lys Leu Asp Val Thr Asn His Asn Lys Asp Tyr Thr Ser Val Glu Gln
195 200 205

Cys Glu Ile Ser Ile Ala Arg Lys Pro Val Val Ala Cys Arg Phe Phe
210 215 220

Arg Val Lys Ser Arg His Lys Tyr Ala Val Ala
225 230 235

<210> 5
<211> 841
<212> DNA
<213> Acropora aspera

<400> 5
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tactttgagg tcgaaggcga tggaaaagga aagccttacg agggggagca gacggtaagg 120
ctggctgtca ccaagggcgg acctctgcca ttgtcttggg atattttatc accacagtgt 180
cagtacggaa gcataccatt caccaagtac cctgaagaca tccctgacta tgtaaagcag 240
tcattcccg gtagatatac atgggagagg atcatgaact ttgaagatgg tgcagtgtgt 300
actgtcagca atgattccag catccaaggc aactgtttca tctaccatgt caagttctct 360
ggtttgaact ttctctccaa tggacctgtt atgcagaaga agacacaggg ctgggaacce 420
aacactgagc gtctctttgc acgagatgga atgctgatag gaaacaactt tatggctctg 480
aagttagaag gaggtggtca ctatttgtgt gaattcaaat ctacttacaa ggcaaggaag 540
cctgtgaaga tggcagggtta tcaactatgtt gaccgcaaac tggatgtaac caatcacaaac 600
aaggattaca cttccgttga gcagcgtgaa atttccattg cagcgaacc tttggctgcc 660
tgctgttttt tcagagtcaa atcaaggcac aaataagcag tggcgtaaaa aacgtagatt 720
ctgatttttag cttatagaag taggaacgaa gaagtgtaga caaccttcaa tgattaaact 780
tttgaataca acscataaaa aaaaaaaaaa aaaaaaaaaa aaaaagcggc cgctcgaatt 840
a 841

<210> 6
<211> 841
<212> DNA
<213> Acropora aspera

<400> 6
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tactttgagg tcgaaggcga tggaaaagga aagccttacg agggggagca gacggtaagg 120
ctggctgtca ccaagggcgg acctctgcca ttgtcttggg atattttatc accacagtgt 180
cagtacggaa gcataccatt caccaagtac cctgaagaca tccctgacta tgtaaagcag 240
tcattcccg gtagatatac atgggagagg atcatgaact ttgaagatgg tgcagtgtgt 300
actgtcagca atgattccag catccaaggc aactgtttca tctaccatgt caagttctct 360
ggtttgaact ttctctccaa tggacctgtt atgcagaaga agacacaggg ctgggaacce 420
aacactgagc gtctctttgc acgagatgga atgctgatag gaaacaactt tatggctctg 480
aagttagaag gaggtggtca ctatttgtgt gaattcaaat ctacttacaa ggcaaggaag 540
cctgtgaaga tggcagggtta tcaactatgtt gaccgcaaac tggatgtaac caatcacaaac 600
aaggattaca cttccgttga gcagcgtgaa atttccattg cagcgaacc tttggctgcc 660
tgccgttttt tcagagtcaa atcaaggcac aaataagcag tggcgtaaaa aacgtagatt 720
ctgatttttag cttatagaag taggaacgaa gaagtgtaga caaccattaa tgattaaact 780
tttgaataca acgccataaa aaaaaaaaaa aaaaaaaaaa aaaaagcggc cgctcgaatt 840
a 841

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4

<210> 7

<211> 18

<212> PRT

<213> *Acropora aspera*, *Montipora caliculata*, and *Porites murrayensis*

<400> 7

Ser Val Ile Ala Lys Gln Met Thr Tyr Lys Val Tyr Met Ser Gly Thr
 1 5 10 15

Val Asn

<210> 8

<211> 25

<212> PRT

<213> *Porites lobata*

<400> 8

Ser Val Ile Ala Lys Gln Met Thr Tyr Lys Val Tyr Met Ser Gly Thr
 1 5 10 15

Val Asn Asn His Tyr Glu Phe Val Thr
 20 25

<210> 9

<211> 225

<212> PRT

<213> *Discosoma sp.*

<400> 9

Met Arg Ser Ser Lys Asn Val Ile Lys Glu Phe Met Arg Phe Lys Val
 1 5 10 15

Arg Met Glu Gly Thr Val Asn Gly His Glu Phe Glu Ile Glu Gly Glu
 20 25 30

Gly Glu Gly Arg Pro Tyr Glu Gly His Asn Thr Val Lys Leu Lys Val
 35 40 45

Thr Lys Gly Gly Pro Leu Pro Phe Ala Trp Asp Ile Leu Ser Pro Gln
 50 55 60

Phe Gln Tyr Gly Asn Lys Val Tyr Val Lys His Pro Ala Asp Ile Pro
 65 70 75 80

Asp Tyr Lys Lys Leu Ser Phe Pro Glu Gly Phe Lys Trp Glu Arg Trp
 85 90 95

Met Asn Phe Glu Asp Gly Gly Val Val Thr Val Thr Gln Asp Ser Ser
 100 105 110

Leu Gln Asp Gly Cys Phe Ile Tyr Lys Val Lys Phe Ile Gly Val Asn
 115 120 125

Phe Pro Ser Asp Gly Pro Val Met Gln Lys Lys Thr Met Gly Trp Glu
 130 135 140

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Ala Ser Thr Lys Arg Leu Tyr Pro Arg Asp Gly Val Leu Lys Gly Glu
 145 150 155 160
 Ile His Lys Ala Leu Lys Leu Lys Asp Gly Gly His Tyr Leu Val Glu
 165 170 175
 Phe Lys Ser Ile Tyr Met Ala Lys Lys Pro Val Gln Leu Pro Gly Tyr
 180 185 190
 Tyr Tyr Val Asp Ser Lys Leu Asp Ile Thr Ser His Asn Glu Asp Tyr
 195 200 205
 Thr Ile Val Glu Gln Tyr Glu Arg Thr Glu Gly Arg His His Leu Phe
 210 215 220
 Leu
 225

<210> 10
 <211> 230
 <212> PRT
 <213> Discosoma sp.

<400> 10
 Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
 1 5 10 15
 Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
 20 25 30
 Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
 35 40 45
 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
 50 55 60
 Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Arg
 65 70 75 80
 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
 85 90 95
 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
 100 105 110
 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
 115 120 125
 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
 130 135 140
 Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
 145 150 155 160
 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
 165 170 175
 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
 180 185 190

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Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
195 200 205

Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
210 215 220

Thr Ala Ala Gly Ile Thr
225 230

<210> 11
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primers

<400> 11
tccgttatcg ctaaacagat 20

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primers

<400> 12
tttgtgcctt gatttgactc 20

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primers

<400> 13
cgccactgag tatttggtgcc 20

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primers

<400> 14
ggcgaccaca ggtttgctg 20

<210> 15
<211> 30

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<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primers

<400> 15

tccgttatcg ctaaacagat gacctacaa

30